

Appl. No. : 10/748,729
Filed : December 29, 2003
Docket : EXCEL.016REC1

IN THE CLAIMS

Please cancel original issued (patent) Claims 1-17. Also, please cancel Claims 25 and 40 without prejudice, amend Claims 18, 19, 20, 26, 29, 31, 32, 36 and 39, and add new Claims 41-48 as follows:

1.-17. (Cancelled)

18. (Currently amended) A telecommunication impedance blocking filter circuit, comprising:

at least one input terminal;

at least one output terminal;

a first filter stage disposed in electrical series between said at least one input and output terminals;

a second filter stage disposed in electrical series with said first filter stage, said second stage comprising a capacitor and switch disposed in series with at least one another; and

a third filter stage disposed in electrical series with said second filter stage; and

a fourth filter stage disposed in electrical series with said third filter stage, said fourth stage being specifically adapted to reduce return loss;

wherein at least one of said first through fourth stages comprises a suppression circuit.

19. (Currently amended) The filter circuit of Claim 18, ~~further comprising a~~ wherein said fourth filter stage is disposed in electrical series between said at least one output terminal and the rest of said first, second and third filter stages within said circuit with said third filter stage, said fourth stage being adapted to reduce return loss.

20. (Currently amended) The filter circuit of Claim 19, wherein said fourth stage comprises at least one R-L-C tank circuit having at least one inductive element and at least one capacitive element disposed in electrical parallel with one another.

21. (Previously Presented) The filter circuit of Claim 18, wherein said switch is actuated in response to at least DC loop current.

22. (Previously Presented) The filter circuit of Claim 21, wherein said at least DC loop current is generated in response to an off-hook transient.

Appl. No. : 10/748,729
Filed : December 29, 2003
Docket : EXCEL.016REC1

23. (Previously Presented) The filter circuit of Claim 18, wherein said switch comprises a reed switch.

24. (Previously Presented) The filter circuit of Claim 18, further comprising a second switch disposed within one of said first, second or third filter stages.

25. (Cancelled)

26. (Currently amended) The filter circuit of Claim 18, ~~further comprising a wherein~~ said suppression circuit is disposed in electrical series with said first, second, and third filter stages.

27. (Previously Presented) The filter circuit of Claim 26, wherein said suppression circuit comprises at least one capacitor adapted to attenuate any voltage spikes that are generated due to on-hook or off-hook transients.

28. (Previously Presented) The filter circuit of Claim 18, further comprising a suppression circuit disposed within one of said first, second, and third filter stages.

29. (Currently amended) A telecommunications filter circuit, comprising:
first and second input terminals;
first and second output terminals;
at least first and second inductors disposed in electrical series between said first input and first output terminals;
at least third and fourth inductors disposed in electrical series between said second input and second output terminals; and
at least one switch inductively coupled to at least one of said first and third inductors, said switch disposed in electrical series with at least one capacitor between first and second common points, said common points being in electrical series with said first and second output terminals, respectively; and

a suppression circuit coupled between said common points and said input terminals, said suppression circuit being adapted to at least mitigate voltage transients generated through actuation of said at least one switch due to connected equipment transients from being fed back to said input terminals.

Appl. No. : 10/748,729
Filed : December 29, 2003
Docket : EXCEL.016REC1

30. (Previously Presented) The filter circuit of Claim 29, further comprising fifth and sixth inductors disposed in electrical series with said first and second inductors, and third and fourth inductors, respectively, said fifth and sixth inductors being adapted to reduce return loss.

31. (Currently amended) The filter circuit of Claim 30, wherein said fifth and sixth inductors are part of respective ones of ~~R-L-C~~ tank circuits ~~each having at least one capacitor in electrical parallel with respective ones of said fifth and sixth inductors.~~

32. (Currently amended) The filter circuit of Claim ~~29~~ 31, wherein said at least one switch is actuated in response to at least DC loop current.

33. (Previously Presented) The filter circuit of Claim 32, wherein said at least DC loop current is generated in response to an off-hook transient.

34. (Previously Presented) The filter circuit of Claim 29, further comprising at least one second switch disposed in electrical parallel with said at least one switch and said at least one capacitor.

35. (Previously Presented) The filter circuit of Claim 29, wherein said at least first and third inductors are disposed within respective ones of tank circuits, said tank circuits being disposed in electrical series with said first and second inductors, and said third and fourth inductors, respectively.

36. (Currently amended) A telecommunication impedance blocking filter circuit, comprising:

at least one input terminal;

at least one output terminal;

a first filter stage disposed in electrical series between said at least one input and output terminals;

a second filter stage disposed in electrical series with said first filter stage, said second stage comprising a capacitor and switch disposed in series with at least one another; and

a suppression circuit disposed in electrical series with said first and second filter stages, said suppression circuit being adapted to suppress voltage transients occurring within said filter circuit as the result of actuation of said switch during at least one of an on-hook to off-hook, or off-hook to on-hook, transient.

Appl. No. : 10/748,729
Filed : December 29, 2003
Docket : EXCEL.016REC1

37. (Previously Presented) The filter circuit of Claim 36, further comprising a third filter stage having at least first and second tank circuits.

38. (Previously Presented) The filter circuit of Claim 36, wherein one of said first and second filter stages comprises at least first and second tank circuits.

39. (Currently amended) A telecommunications circuit comprising:
first and second circuit paths disposed substantially in electrical parallel to one another between respective sets of inputs and output terminals, said first and second circuit paths each comprising a plurality of inductive elements;

a capacitor and switch disposed in series with at least one another, said capacitor and switch being disposed electrically between said first and second circuit paths; and

a suppression circuit disposed electrically between said first and second circuit paths, said suppression circuit being adapted to suppress voltage transients occurring within said filter circuit as the result of actuation of said switch during at least one of an on-hook to off-hook, or off-hook to on-hook, transient.

40. (Cancelled)

41. (New) A telecommunication impedance blocking filter circuit, comprising:
at least one input terminal;
at least one output terminal;
a first filter stage disposed in electrical series between said at least one input and output terminals;

a second filter stage disposed in electrical series with said first filter stage, said second stage comprising a capacitor and switch disposed in series with at least one another; and

a suppression circuit disposed electrically between said at least one input terminal and said second filter stage, said suppression circuit being adapted to at least mitigate voltage transients generated through actuation of said switch from being fed back to said at least one input terminal.

42. (New) The filter circuit of Claim 41, wherein said circuit is coupled to at least one telecommunications device via said at least one input terminal, and said mitigation of voltage transients prevents interruption of the operation of said at least one device.

Appl. No. : **10/748,729**
Filed : **December 29, 2003**
Docket : **EXCEL.016REC1**

43. (New) The filter circuit of Claim 42, wherein said at least one telecommunications device comprises an ADSL modem.

44. (New) The filter circuit of Claim 41, further comprising a tank circuit having an inductive element and capacitive element disposed in electrical parallel with one another, said tank circuit being disposed electrically between said second filter stage and said at least one output terminal.

45. (New) The filter circuit of Claim 41, further comprising a third filter stage disposed in electrical series with said first and second filter stages, said fourth stage being adapted to reduce return loss.

46. (New) The filter circuit of Claim 44, further comprising a third filter stage disposed in electrical series with said first and second filter stages, said fourth stage being adapted to reduce return loss.

47. (New) A telecommunication impedance blocking filter circuit, comprising:
a plurality of input terminals;
a plurality of output terminals;
a first filter stage disposed in electrical series between said at input and output terminals;
a second filter stage disposed in electrical series with said first filter stage, said second stage comprising a capacitor and switch disposed in series with at least one another; and
a suppression circuit disposed electrically between said first and second filter stages, said suppression circuit being adapted to at least mitigate voltage transients generated through actuation of said switch due to connected equipment transients from being fed back to said input terminals in order to mitigate the effect of said transients on external equipment connected to said input terminals.

48. (New) The filter circuit of Claim 47, further comprising a tank circuit stage having first and second tank circuits each having an inductive element and capacitive element disposed in electrical parallel with one another, said tank circuit stage being disposed electrically between said second filter stage and said output terminals.